

# **New NSR Applicability Test**

**CHP Turbine Technology and National Regulatory Forum**

**San Diego, CA**

**March 5-6, 2003**

# Understanding the New Applicability Test:

A project is a major modification for a regulated NSR pollutant if it causes -

- (1) A **significant emissions increase** at the project;
- (2) A **significant net emissions increase** at the source

# Understanding the New Applicability Test:

## Old NSR Requirements

- 
- Non-EUSGUS and New Emissions Units :
    - “Actual to Potential” Test -  
Compare past actual emissions  
to future potential emissions.
  - EUSGUs:
    - The “WEPCO Test” -  
Compare past actual emissions  
to representative actual annual emissions.

# Understanding the New Applicability Test

## New Requirements

### Actual-to-projected-actual Test

- Apply to changes at any existing emissions unit (includes replacement and reconstructed units\*).
- Source must make a projection of post-change annual emissions that are expected to result from the project.

---

\* See 67 FR p. 80194, Dec 31, 2002

# Understanding the New Applicability Test:

**Step #1: Baseline Actual Emissions**

**Step #2: Projected-actual emissions**

# Step 1 : Baseline Actual Emissions

Determining the “past actual” emissions for measuring emissions increases from existing EUSGUs and other existing emissions units.



# Baseline Actual Emissions:

## WEPCO Provision for EUSGUs (unchanged by NSR Reform)

- Baseline actual emissions are based on **any consecutive two-year period within the 5 years immediately preceding the project.**  
**See 40 CFR 52.21(b)(48)(i)**
- A period other than a 2-year period or a baseline period prior to the last 5 years may be used if the reviewing authority determines it to be more representative of normal operations. **[WEPCO Preamble @ 57FR 32323, July 21, 1992].**

# Baseline Actual Emissions

## Prior Applicability Requirement for non-EUSGUs

- Average of the annual emissions for a two year-period preceding the project which is representative of normal operations;
- OR
- Another period if reviewing authority determines it to be more representative of operations.\*

---

\* Test generally requires a showing that most recent 2-year period is not representative of normal operation.



# “Baseline Actual Emissions”:

## **New Applicability Requirement for non-EUSGUs**

- Average annual emissions rate based on unit's operation during any consecutive 24- month period in the past 10 years.
  - ✓ Full 10-year look back available only if adequate data accurately describing unit's operation is available for the selected time period. See 40 CFR 52.21(b)(48)(ii)(e). No other period may be used.

# “Baseline Actual Emissions”

## **Ten-year Look Back**

If project needs a permit: use 10-year period immediately preceding the date on which complete application is submitted.

If project does not need a permit: use 10-year period immediately preceding date that actual construction of physical or operational change begins.

---

# “Baseline Actual Emissions”:

## **New Applicability Requirement for non-EUSGUs**

- Average annual emissions rate based on unit's operation during any consecutive 24- month period in the past 10 years.
  - ✓ Use same 24-month period for all emissions units involved in project. But may use different 24-month period for each pollutant. See 40 CFR 52.21(b)(48)(ii)(d).

# “Baseline Actual Emissions”:

## **New Applicability Requirement for non-EUSGUs**

- Average annual emissions rate based on unit's operation during any consecutive 24- month period in the past 10 years.
  - ✓ Reduce for any non-compliant emissions, i.e., exceeded unit's allowable emissions rate. See 40 CFR 52.21(b)(48)(ii)(b)

# “Baseline Actual Emissions”:

## **New Applicability Requirement for non-EUSGUs**

- Average annual emissions rate based on unit's operation during any consecutive 24- month period in the past 10 years.
  - ✓ Adjust annual emissions rate for non-operative portion of 24-month period. [See 67 FR p. 80196, Dec. 31, 2002.]

# “Baseline Actual Emissions”

## **Adjustment to Baseline Calculation**

For existing emissions unit that did not exist during the 24-month baseline period, count the emissions rate as zero.

For existing unit that operated for portion of 24-month period, calculate average rate using zero for that portion of time when unit was not in operation.

# “Baseline Actual Emissions”:

## **New Applicability Requirement for non-EUSGUs**

- Average annual emissions based on unit's operation during any consecutive 24- month period in the past 10 years.
  - ✓ Adjust average annual rate to reflect current emissions control requirements. See 40 CFR 52.21(b)(48)(ii)(c).

# “Baseline Actual Emissions”

## **Adjustment to Baseline Calculation**

An adjustment to the baseline calculation is required if any legally enforceable emissions limitation or operating restriction (including but not limited to a State or Federal requirement, such as RACT, BACT, LAER, NSPS, NESHAP, etc.) currently applies to the unit being changed.

---



# “Baseline Actual Emissions”

## **Adjustment to Baseline Calculation**

An adjustment should also be made for such things as a more stringent fuel-use requirement (type or amount of fuel), sulfur-in-fuel limit, etc.

# “Baseline Actual Emissions”

## **Adjustment to Baseline Calculation**

**Voluntary** reductions resulting in enforceable restrictions (e.g., use of clean fuel or lower-polluting raw material to acquire creditable reductions for netting) also must be considered for adjustment of baseline.

[See 67 FR p. 80201, Dec 31, 2002.]

# “Baseline Actual Emissions”

## **Adjustment to Baseline Calculation**

For a new unit (<2 yrs old) that will be changed by the project, baseline is:

- **zero**, if unit has not yet begun operation;
- **PTE**, if the unit has begun operation.

[See 67 FR p. 80196, Dec 31, 2002.]


# Using “Baseline Actual Emissions”

- **Baseline Actual Emissions will be used for:**
  - Determining emissions increase resulting from changes at existing units.
  - Computing contemporaneous emissions changes.
  - Establishing a PAL.
- **Old “Actual Emissions” definition retained for:**
  - Conducting air quality analyses (NAAQS, PSD increments, AQRVs)
  - Computing offsets required, offset credits, etc.

# Baseline Actual Emissions

## EXAMPLE #1

Year	VOC Emissions
1993	75 tpy
1994	85 tpy
1995	95 tpy
1996	80 tpy
1997	60 tpy
1998	80 tpy
1999	75 tpy
2000	40 tpy
2001	55 tpy
2002	75 tpy



**New Rule: Average annual emissions = 90 tpy**

[Source did not have any more stringent emissions limitations subsequently imposed; thus, no adjustment necessary].

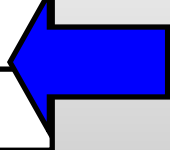


**Old Rule: Average annual emissions = 65 tpy**

# Baseline Actual Emissions

## EXAMPLE #2

Year	VOC Emissions
1993	75 tpy
1994	50 tpy
1995	55 tpy
1996	60 tpy
1997	60 tpy
1998	65 tpy
1999	60 tpy
2000	40 tpy
2001	55 tpy
2002	75 tpy



Old rule/ New rule:

Average annual emissions = 65 tpy

# Baseline Actual Emissions

## EXAMPLE #3

Year	VOC Emissions
1993	750 tpy
1994	850 tpy
1995	950 tpy
1996	800 tpy
1997	70 tpy
1998	60 tpy
1999	65 tpy
2000	60 tpy
2001	70 tpy
2002	65 tpy

**New Rule: Average annual emissions = 900 tpy.**  
**Adjusted baseline =  $900 \times 0.10 = 90$  tpy.**

**Requirement for Thermal Oxidizer;  
controls VOC emissions by 90%**

**Old Rule: Average annual emissions = 68 tpy**

# Baseline Actual Emissions

## EXAMPLE #4

Year	VOC Emissions
1993	750 tpy
1994	850 tpy
1995	950 tpy
1996	800 tpy
1997	60 tpy
1998	65 tpy
1999	85 tpy
2000	80 tpy
2001	90 tpy
2002	95 tpy

**Average annual emissions = 900 tpy.**  
**Adjusted baseline =  $900 \times 0.10 = 90$  tpy.**

**Requirement for Thermal Oxidizer;  
controls VOC emissions by 90%**

**New/Old Rule: Avg annual emissions = 93 tpy**



# Baseline Actual Emissions

## EXAMPLE # 5 (EUSGU)

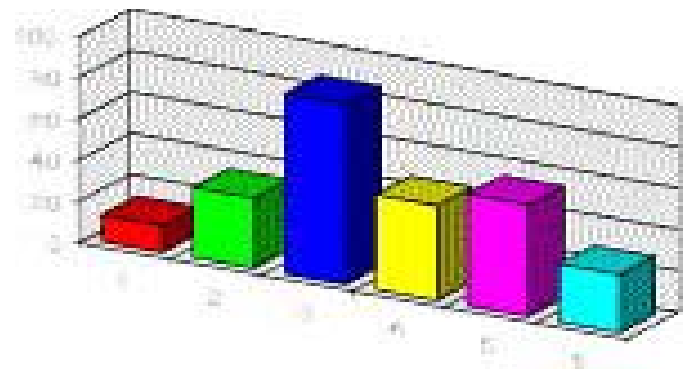
Year	SO2 Emissions
1998	150 tpy
1999	165 tpy
2000	175 tpy
2001	150 tpy
2002	155 tpy



WEPCO Rule: Avg. annual emissions = 170 tpy

New Rule: Avg. annual emissions = 170 tpy

# Step 2: Projected Actual Emissions



# Projected Actual Emissions

## Projection Calculations

Source must project changed unit's maximum actual annual emissions for the 5-year period after the change,

OR

10-year period after the change (if the change involves an increase in the emissions unit's PTE or capacity).

---

# Projected Actual Emissions

## Projection Calculations

- **“Projected actual emissions”** --The first year begins on the day the emissions unit resumes regular operation following the change and includes the 12 months after this date. **[See 40 CFR 52.21(b)(41)(i)]**

# Projected Actual Emissions

## Projection Calculations

**A unit's projected emissions rate is calculated as the product of**

**(1) The hourly emissions rate -**

- Based on unit's post-change operational capabilities;
- Taking into account the legally enforceable restrictions that could affect the hourly rate.

**(2) The projected level of utilization, based on –**

- Unit's historical annual utilization rate
- Available information about unit's likely post-change capacity utilization.

# Projected Actual Emissions

## Projection Calculations

In projecting the **future utilization level**, the applicant should consider both the **expected** and **highest** projections of the business activity that could be expected to be achieved and that are consistent with information the company publishes for business-related purposes. [ See 67 FR p. 80196, Dec. 31, 2002]

# Projected Actual Emissions

## Projection Calculations

The applicant may adjust the projection to exclude any portion of the emissions increase that the changed unit(s)

-- could have accommodated during the 24-month baseline period,

AND

-- is unrelated to the change.

# Recordkeeping and Reporting

When there is a reasonable possibility that the project could result in a significant emissions increase AND the source elects to calculate projected actual emissions,\* EUSGUs and other changed emissions units must meet certain recordkeeping and reporting requirements:

- 
- \* Sources that show no significant emissions increase by using unit's PTE are not subject to recordkeeping for purposes of "actual-to-projected actual" test. See 40 CFR 52.21(r)(6)



# Recordkeeping and Reporting

## Remember!

The criteria that “**there is a reasonable possibility that the project could result in a significant emissions increase**” must be addressed despite the fact that the source is projecting an **insignificant emissions increase** as a result of the changes being made.

Thus, **recordkeeping/reporting requirements apply** if the source **could have** a significant emissions increase (based on highest projections), *even though* the source has projected that a significant emissions increase **will not** occur (based on expected projections).

# Recordkeeping and Reporting

	Pre-construction Notification	Recordkeeping	Reporting
<b>Modified EUSGUs</b>	<b>Yes</b>	<b>Yes</b>	<b>Annual (5 or 10 Yrs)</b>
<b>Other Modified Units</b>	<b>No</b>	<b>Yes</b>	<b>Only if Projection Exceeded</b>

# Recordkeeping and Reporting

**Pre-construction notification\* for EUSGUs, includes –**

- Project description;**
- Emissions units affected by project;**
- Description of applicability test used (baseline emissions, projected emissions, amount of excluded emissions and explanation).**

---

**\*Approval not needed to commence project. See 40 CFR 52.21(r)(6)(ii)**

# Recordkeeping and Reporting

## For any modified unit, source must –

- Monitor emissions of any regulated NSR pollutant that could increase as a result of project;
- Calculate & maintain record of annual emissions (tpy) for 5 (**or 10\***) years following resumption of unit's regular operation;

---

**\*If the project increases the design capacity or PTE.**

# Recordkeeping and Reporting

**EUSGUs** must submit an annual report (within 60 days after end of year\*) of annual emissions during the calendar year\* that preceded submission of the report.

**[See 40 CFR 52.21(r)(iv)]**

---

**\*12-month period beginning on date the changed unit resumes regular operation.**

# Recordkeeping and Reporting

**Other modified units must submit a report if annual emissions from project –**

- (1) Exceed the baseline actual emissions by significant amount; and**
- (2) Differ from pre-construction projection.**

**[See 40 CFR 52.21(r)(v)]**

---

# Recordkeeping and Reporting

For all modified emissions units, source must make required information available for review upon request by Reviewing Authority or general public.  
[See 40 CFR 52.21(r)(7).]

# Applicability Test

## EXAMPLE

### Modification at Plant ABC

Assumptions: Existing Major Source, Attainment Area, VOC Emissions  
( Plant ABC began operations in late 2000)

Year*	VOC Actual Emissions
2001	125 tpy
2002	135 tpy
2003	155 tpy (projected)
2004	155 tpy (projected)
2005	160 tpy (projected)
2006	160 tpy (projected)
2007	165 tpy (projected)

Post-change Potential Emissions:

**300 tpy VOC**



# Applicability Test (Old)

## EXAMPLE

### Modification at Plant ABC

Assumptions: Existing Major Source, Attainment Area, VOC Emissions

\* Plant ABC began operations in late 2000

Year*	VOC Actual Emissions
2001	125 tpy
2002	135 tpy
2003	155 tpy (projected)
2004	155 tpy (projected)
2005	160 tpy (projected)
2006	160 tpy (projected)
2007	165 tpy (projected)

Future Potential Emissions:

300 tpy VOC

#### Current Rule

past actual (130 tpy) vs. future PTE (300 tpy)

Proposed Increase = **170 tpy [>40 tpy]**

**Net emissions increase = 170 tpy  
[>40 tpy]**

Modification subject to PSD

# Applicability Test (New)

## EXAMPLE

### Modification at Plant ABC

Assumptions: Existing Major Source, Attainment Area, VOC Emissions

\* Plant ABC began operations in late 2000

Year*	VOC Actual Emissions
2001	125 tpy
2002	135 tpy
2003	155 tpy (projected)
2004	155 tpy (projected)
2005	160 tpy (projected)
2006	160 tpy (projected)
2007	165 tpy (projected)

Future Potential Emissions:  
300 tpy VOC

#### New Rule

Baseline actual emissions (130 tpy) vs.  
projected actual (165 tpy)

Projected Increase = **35 tpy** [**< 40 tpy**]

**MINOR MODIFICATION**

# **Plantwide Applicability Limitations (PALs)**

**CHP Turbine Technology and National Regulatory Forum  
San Diego, CA  
March 5-6, 2003**

# Plantwide Applicability Limitations

- An alternative approach for determining major NSR applicability.
- The final rules address only “actuals PALs”. We will be proposing provisions for “allowables PALs” at a later date.
- A PAL is an annual (facility-wide) emission limitation (12-month total, rolled monthly) under which the facility can make any changes without triggering NSR review for that pollutant.
  - ▢ Pollutant-specific
  - ▢ 10-year term.
- A PAL for VOC or NO<sub>x</sub> shall not be allowed in an extreme ozone nonattainment area.

# Establishing a PAL

- At the time of setting a PAL, classify all emissions units as new or existing.
- Determine **baseline actual emissions** of all units:
  - For **new units**, add the **PTE** of the units
  - For existing units , pick a consecutive 24-month period (baseline period) in the preceding 10 years.
    - For **existing units constructed prior to and during the baseline period**, add **average emissions** adjusted to reflect current applicable requirements
    - For **existing units that began construction after the baseline period**, add the **PTE** of the units

# Establishing a PAL (Cont..d)

- Add the pollutant-specific significant emissions rate to the baseline actual emissions for the PAL pollutant;
- Subtract any emissions from emissions units that operated during the 24-month period and have since been permanently shut down; and
- Establish a step-down PAL if there are any requirements that have an effective date during the term of the PAL.

# Reopening PAL permits

- Reviewing Authority shall reopen the PAL permit to:
  - Correct typographical or calculation errors made in setting the PAL.
  - Reduce the PAL to create emissions reductions for offset purposes.
  - Revise the PAL to reflect an increase in the PAL.

# Reopening PAL permits (Cont..d)

- Reviewing Authority **may reopen** the PAL permit to:
  - Reduce the PAL **to reflect newly applicable Federal requirements** with compliance dates after the PAL effective date. (However, PAL must be adjusted at TV or PAL permit renewal, whichever occurs first.)
  - Reduce the PAL **consistent with any other requirement** that the State may impose under its SIP.
  - Reduce the PAL if it determines that a reduction is necessary to **avoid causing or contributing to a NAAQS or PSD increment violation**



# Increasing a PAL

- Allowed if the increased emissions can not be accommodated under the PAL, even if all significant and major emissions units were to meet a BACT level of control.
- Emissions units causing the need for an increase (modified or new units) must go through major NSR.
- New PAL based on sum of:
  - Baseline actual emissions of small emissions units;
  - Baseline actual emissions of significant and major emissions units assuming a BACT level of control; and,
  - Allowable emissions of new or modified emissions units.

# PAL Renewal

- At least 6 months prior to but not earlier than 18 months from PAL expiration date, the O/O must submit an application for renewal or expiration.
- The reviewing authority shall provide a written rationale for the proposed PAL level for public comment.
- The new PAL level can not be higher than the existing PAL (unless PAL increase provisions are met) or the PTE of the source

# PAL Renewal (Cont...d)

- If baseline actual emissions plus significant level are  $\geq 80\%$  of current PAL, then PAL may be renewed at current level.
- If baseline actual emissions plus significant level are  $< 80\%$  then:
  - PAL may be established at a level that is more representative of baseline actual emissions, or a level that is appropriate based on air quality needs or other considerations.

# PAL Expiration

- Within the timeframe specified for PAL renewals, the source shall **submit a proposed allocation** of the PAL to each emissions unit.
  - The Reviewing Authority shall decide whether and how the PAL will be distributed and **issue a revised permit** incorporating allowable limits for each emissions unit.
  - Any subsequent physical or operational change at the source will be **subject to major NSR review**.
-

# PAL Monitoring Requirements

- PAL permit must contain **enforceable requirements** to determine plantwide emissions (12-month total, rolled monthly).
- A source may use any of the following approaches:
  - Mass balance calculations for activities using solvents or coatings.
  - Continuous Emissions Monitoring Systems (CEMS).
  - Continuous Parameter Monitoring Systems (CPMS) or Predictive Emissions Monitoring Systems (PEMS).
  - Emissions Factors.
- If no monitoring data exists for an emissions unit for a time period, the source owner must report the **maximum potential emissions** without considering enforceable or operating emissions limitations, unless another method is specified in the permit.

# PAL Monitoring (Cont..d)

- Where an O/O cannot demonstrate a correlation between the monitored parameter(s) and the PAL pollutant emissions rate at all operating points of an emissions unit, the reviewing authority shall at the time of permit issuance:
  - Establish default value(s) for determining compliance with the PAL based on the highest potential emissions reasonably estimated at such operating points; or
  - Determine that the operation of the emissions unit in the absence of a correlation is a violation of the PAL.

# Recordkeeping/Reporting

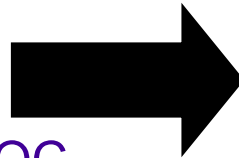
- The PAL permit shall require the O/O to maintain the following records for the duration of the PAL effective period plus 5 years:
  - A copy of the PAL permit application and any applications for revisions to the PAL: and
  - Each annual certification of compliance pursuant to Title V and the data relied on in certifying the compliance.
- The O/O shall submit semi-annual monitoring reports and prompt deviation reports to the Reviewing Authority in accordance with the applicable Title V permitting program.

# PAL EXAMPLE

Existing Source:

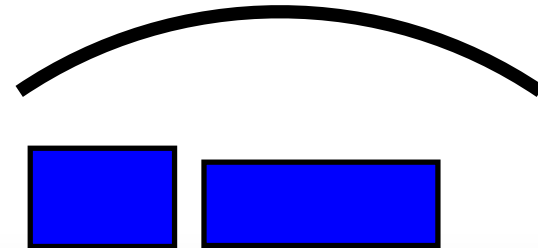
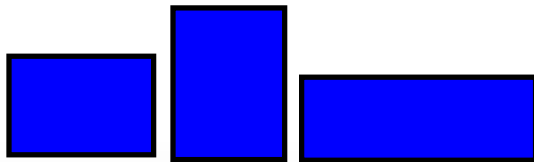
Actual Emissions= 150 tpy VOC

Potential Emissions = 400 tpy VOC



Plantwide Limit =

$150 + 40^* - 50 = 140 \text{ tpy VOC}$



3 units 50 tpy actual emissions each during baseline period. 1 unit shutdown since then. Hence PAL level =  $150 + 40 - 50 = 140 \text{ tpy}$ . Any change not subject to major NSR if plantwide emissions remain below 140 tpy VOC.

\* 40 tpy is significant emissions rate for VOC



# Clean Unit Test

CHP Turbine Technology and National Regulatory Forum  
San Diego, CA  
March 5-6, 2003

---

# Clean Unit Test

## **General Summary:**

- The Clean Unit Test is a new type of applicability test for emissions units designated as clean units.
- If a physical change or change in the method of operation does not cause an emissions unit to exceed its permitted allowable emissions or to modify its work practice requirements, then major NSR does not apply.

# Clean Unit Test

## General Summary (continued):

- If the permitted allowable emissions or work practice requirements will be exceeded or altered, then the source loses clean unit status and must determine whether the projected post-change emissions will result in a significant emissions increase and a significant net emissions increase.
- Clean Unit status available for up to 10 years after applying emission controls.
- Clean unit status is available in both attainment and non-attainment areas.

# Clean Unit Test

## What Qualifies as a “Clean Unit”?

### Track 1:

- Clean Unit Status is automatic for most emissions units that went through major NSR and are complying with BACT/LAER.
- In order to qualify automatically, the BACT/LAER determination must have resulted in some degree of emissions control.

### Track 2:

- Clean Unit Status can be granted through a SIP-approved permitting process if the emissions control is:
  - Comparable to BACT/LAER; or
  - Substantially as effective as BACT/LAER.

# Clean Unit Test

## What Qualifies as a “Clean Unit”? (continued)

### **Track 2 (continued):**

- This process must include public notice and the opportunity for public comment.

# Clean Unit Test

## What Qualifies as “Emissions Controls”?

- Emissions controls can be add-on controls, pollution prevention, or work practices; but an investment in the control is required to qualify.
- An investment includes any cost which would ordinarily qualify as a capital expense under the IRS filing guidance.
- It also includes any costs incurred to change the emissions unit or process to implement a pollution prevention approach.
- This includes research costs, retooling of equipment, reformulation, etc...

# Clean Unit Test

## Obtaining Clean Unit Status Through a SIP-Approved Permitting Process

- An emissions unit trying to obtain clean unit status through a SIP-approved permitting process must pass a two-part test:
  - be comparable to BACT or LAER;
  - pass the air quality test (i.e., show that it will not cause or contribute to a NAAQS or PSD increment violation, or adversely impact an AQRV such as visibility).
- Comparability to BACT/LAER can be done in one of two ways:
  - comparison to BACT/LAER determination in RBLC;
  - case-by-case demonstration.

# Clean Unit Test

## Comparison with RBLC data

### Non-attainment areas:

- The emissions unit must compare its control technology to the best performing **five** similar sources in the RBLC for which a LAER determination has been made in the last **five** years.
- If the emission limitation achieved by the emissions unit is at least as stringent as any of the best performing five sources, and the unit passes the air quality test, then the unit shall be presumed to qualify as a clean unit.



# Clean Unit Test

## Comparison with RBLC data (continued)

### Attainment areas:

- The emissions unit must compare its control technology to **ALL** BACT/LAER determinations that have been entered in the RBLC in the past five years and for which is technically feasible to apply the technology to the unit in question.
- If the emission limitation achieved by the emissions unit is at least as stringent as the average of the determinations, and the unit passes the air quality test, then the unit shall be presumed to qualify as a clean unit.

# Clean Unit Test

## Case-by-Case Demonstration

### Attainment areas:

- You may show on a case-by-case basis that your emissions unit will achieve a level of control that is “substantially as effective” as BACT.
  - The reviewing authority will make the decision on whether a particular control technology is “substantially as effective” as BACT.
  - Case-by-case determinations must meet the same air quality test as the units going through a BACT analysis and must include opportunity for public comment.
-

# Clean Unit Test

## Case-by-Case Demonstration (continued)

### Non-attainment areas:

- You may show on a case-by-case basis that your emissions unit will achieve a level of control that is “substantially as effective” as LAER.
- The reviewing authority will make the decision on whether a particular control technology is “substantially as effective” as LAER.
- Case-by-case determinations must meet the same air quality test as the units going through a LAER analysis and must include opportunity for public comment.

# Clean Unit Test

## What Triggers NSR?

- First, it must be determined if the project causes the need to change the emission limitation(s) or work practices that are in the permit which were established in conjunction with the Clean Unit designation.
- If the answer is YES, then the emissions unit loses clean unit status and the project is subject to the applicability requirements as if the emissions unit were never a Clean Unit.
- If the answer is NO, then clean unit status is maintained and no emissions increase is deemed to have occurred from the project for the purposes of major NSR.

# Clean Unit Test

## Obtaining Clean Unit Status for Units with Previously Installed Controls

- If the emissions unit has been through major NSR, the unit automatically qualifies for clean unit status.
  - The clean unit designation is based on the controls that went into service (either BACT or LAER) as a result of the major NSR review.
  - For units that have not been through major NSR, the reviewing authority will only be able to grant clean unit status for previously installed controls if they were installed before the effective date of the program in the specific area.
-

# Clean Unit Test

## Obtaining Clean Unit Status for Units with Previously Installed Controls (continued)

- When applying for a retroactive clean unit designation, the reviewing authority is allowed to compare the unit's emission control level to the BACT or LAER level that would have applied at the time construction of the unit began.

# Clean Unit Test

## Clean Unit Status Effective Date

- For emissions units that have been through major NSR review, the effective date is the date the emissions control technology went into service, or 3 years after issuance of the permit, whichever is earlier.
- The effective date can be no sooner than the date the Clean Unit Test is incorporated into the SIP and becomes effective for the State in which the unit is located.
- For emission units re-qualifying for clean unit status by going through major NSR using existing technology that is determined to meet current-day BACT or LAER, the effective date is the date the major NSR permit is issued.

# Clean Unit Test

## Clean Unit Status Effective Date (continued)

- For emissions units using a SIP-approved permitting process other than major NSR, the effective date is the **latter** of the following:
  - date the State or local agency permit designating the unit as a clean unit is issued;
  - the date the emissions control went into service.



# Clean Unit Test

## Clean Unit Status Expiration Date

- In most cases, clean unit status lasts for 10 years from its effective date.
  - If at any point prior to the 10 year duration, the owner or operator fails to comply with the permit requirements for the clean unit, then clean unit status expires.
  - When clean unit status expires, the emissions unit is subject to the major NSR applicability test as if the unit is not a Clean Unit.
  - The permitted emissions levels for the clean unit DO NOT expire.
-

# Clean Unit Test

## Re-qualifying for Clean Unit Status

- To re-qualify for clean unit status, the unit would generally have to follow the same procedures used to obtain the initial clean unit designation.
- The only difference is that no additional investment is required for units re-qualifying as clean unit with the same emissions controls.

# Clean Unit Test

## Permit Requirements for Clean Units

- If the unit qualifies for clean unit status through major NSR, then the major NSR permit will contain:
  - the emissions limitation based on BACT or LEAR;
  - other permit terms and conditions such as hours of operation;
  - monitoring, recordkeeping, and reporting requirements.

# Clean Unit Test

## Permit Requirements for Clean Units (continued)

- If the unit qualifies through a SIP-approved permitting process, other than major NSR, the permit must specify:
    - the source specific allowables for clean unit status;
    - other terms and conditions deemed to be comparable to BACT/LAER requirements (e.g. limits on operating parameters);
    - any conditions used as the basis for the determination (e.g., limits on raw materials or hours of operation);
    - the monitoring, recordkeeping, and reporting requirements necessary to demonstrate clean unit status.
  - Additional monitoring, recordkeeping, and reporting requirements may be required.
-

# Clean Unit Test

## Permit Requirements for Clean Units (continued)

- Clean unit status must be incorporated into the source's title V permit.
  - Incorporation of clean unit status, with its effective and expiration dates, must be incorporated into the title V permit at the first opportunity, such as a modification, revision, reopening, or renewal of the title V permit, whichever comes first.
  - Any changes to the clean unit permit terms and conditions must be done through a SIP-approved permitting process and only then incorporated into the source's title V permit.
-

# Clean Unit Test

## Netting / Offsets

- Emission changes from a clean unit must not be included in a netting analysis or used to generate offsets unless this happens before or after (not during) the clean unit designation is granted or expired.
  - However, if emissions from the clean unit are reduced below the level that qualified it for clean unit status, a credit for the amount of the difference between the level that qualified the unit for clean unit status and the new emissions limitation, may be generated.
  - Those emissions must be surplus, quantifiable, permanent, federally enforceable, and enforceable as a practical matter.
-

# Pollution Control Project Exclusion

CHP Turbine Technology and National Regulatory Forum  
San Diego, CA  
March 5-6, 2003

# Pollution Control Project Exclusion

## Overview

- The PCP exclusion allows a project that reduces emissions of one or more air pollutants regulated under the Act to avoid major NSR in spite of causing a significant emissions increase in a collateral pollutant.
  - Previous WEPCO rules provided a PCP Exclusion for EUSGUs. A similar exclusion was extended to other industries in a policy memo issued in 1994.
-



# Pollution Control Project Exclusion

## Overview (cont.)

- The new rules will replace WEPCO PCP provisions and codify new requirements for all industries.
- The PCP Exclusion only applies to activities at an existing emissions unit; addition of new emissions units does not qualify for the exclusion.
- Collateral pollutants must be minimized within the physical and operational standards of the device

# Pollution Control Project Exclusion

## Key Changes

- Significant changes/clarifications to the new PCP Exclusion:
  - Eliminates “primary purpose test”
  - Eliminates barriers on projects that increase utilization
  - Disallows consideration of non-air impacts
  - Provides “notice-and-go” approach for listed PCPs
  - Adds more listed technologies; provides details for ODS & fuel switches
  - Disallows generation of emission reduction credits from initial application of the PCP
  - Enables work practice standards to qualify

# Pollution Control Project Exclusion

## Qualifying for the Exclusion

- Sources must satisfy 2 tests:
  - **Environmentally Beneficial Test:** Show that benefits of the emissions decrease outweigh impact of emissions increase
  - **“Cause-or-Contribute” Test:** PCP cannot cause or contribute to a NAAQS or PSD increment violation, or adversely impact a Class I AQRV (if identified).
- **Listed PCPs** -- No permit action required, unless req'd by minor source program; notice sent to the Reviewing Authority with information on the project and air quality analysis.

# Pollution Control Project Exclusion

## Qualifying for the Exclusion (cont.)

- Notice Requirements for Listed PCPs:
  - Description of the project;
  - Projected increases & decreases from the project, as part of the environmentally beneficial analysis;
  - Description of monitoring and recordkeeping methods;
  - Certification that the project will be designed and operated consistent with proper practices, and consistent with the EB and AQ analyses; and
  - Demonstration that no adverse air quality impact will result from the project.

# Pollution Control Project Exclusion

## Qualifying for the Exclusion (cont.)

- **Unlisted PCPs** – A permitting action, with public notice and comment, is required to show that both tests are satisfied. Application should include same information as notice would contain for listed projects.
  - **Rebuilt and upgraded PCPs** can qualify, if they are more effective/stringent than replaced device.
-

# Pollution Control Project Exclusion

## “Listed” Projects

- Published list is derived from lists in the 1994 guidance memo and WEPCO rule, along with:
    - several commonly used technologies, previously omitted
    - clarifying an environmentally beneficial ODS switch
    - specifying each qualifying “switch to less polluting fuel”
  - Unlisted projects can be permanently listed through petitioning the Administrator. EPA must undergo notice and comment rulemaking to add projects to the approved list.
-

# Pollution Control Project Exclusion

## Implementation

- **“Notice and Go”**: For sources using a listed technology and satisfying the required tests, they may begin construction on their PCP concurrent with sending notice to their RA (unless applicable minor source permitting requirements advance approval).
- The RA can order a Source to not undertake the PCP if they disagree that the Exclusion applies.
- Sources are legally required to operate PCPs consistent with reasonable engineering practices and the elements of their EB and AQ analyses.

# Pollution Control Project Exclusion

## Implementation

- For listed or unlisted projects, the Reviewing Authority can require a complete air quality impacts analysis if:
  - the collateral pollutant increase is significant over the levels in the most recent modeling analysis; or,
  - the RA believes that the PCP would cause or contribute to a violation of a NAAQS or PSD increment, or adversely impact a Class I AQRV (if identified by the FLM).
- **Recordkeeping** – o/o must maintain onsite copies of the environmentally beneficial analysis, the air quality impacts analysis, and other emission records to prove the PCP operated in an approved manner.



# **Proposed NSR Rules for Routine Maintenance, Repair and Replacement (RMRR)**

**CHP Turbine Technology and National Regulatory Forum  
San Diego, CA  
March 5-6, 2003**

# Overview

- **Proposed Rule Signed by Administrator on Nov 22**
  - **Published in Federal Register on Dec 31, 2002**
  - **60 day public comment period .... Just extended an additional 60 days (ends May 2, 2003)**
  - **Will hold 5 Public Hearing (dates and locations TBD)**
-

# What Activities do the Proposed Rule intend to exclude as RMRR?

All activities at the source to maintain, facilitate, restore or improve the efficiency, reliability, availability, and safety of the source.

---

# Proposed Approaches

- (1a) Annual Maintenance, Repair and Replacement Allowance (**“Safe Harbor” approach**)
- (1b) Equipment Replacement Provision (**“Like Kind Replacement” approach**)
- (2) Capacity-based
- (3) Age-based
- (4) Solicit public input on any other viable approach

>>>> Case-by-Case approach (a.k.a., “4-factor test”) remains available under all options.

>>>> The above options are voluntary. Sources may elect to use the case-by-case approach if they choose.

>>>> Rule language is proposed for only Options 1a and 1b. .

# Annual MRR Allowance

Industry Sector Percentage (IRS's AAGRAP approach  
but requesting comment)

x

Replacement Cost of Facility (Use EPA Air Pollution  
Cost Manual)

=

Annual Allowance

---

# Annual MRR Allowance (cont.)

- Facility—wide (but requesting comment on process unit basis)
- Can use calendar of fiscal year expenses; requesting comment on providing a multi-year allowance (e.g., for 5 years)
- Must add MRR costs, starting with lowest to the highest expense, and then compare to annual MRR allowance. All activities with costs below the allowance are “routine.”

# Annual MRR Allowance (cont.)

- All activities that do not fit under the MRR allowance are not routine by this approach
- Report to Reviewing Authority 60 days after end of year term containing:
  - Estimated stationary source replacement value
  - Station source RMRR allowance
  - Brief description/costs of all activities at the source

# Annual MRR Allowance (cont.)

- Except any activity that:
  - Emits a New NSR regulated pollutant
  - Replaces an entire existing unit
  - Constructs a entirely new process unit
  - Increases maximum achievable hourly emissions rate of a regulated NSR pollutant



# Annual MRR Allowance (cont.)

## EXAMPLE

Activity	Cost
A	\$750 K
B	\$50 K
C	\$100 K
D	\$320 K
E	\$1 M
F	\$300 K
G	\$200 K
H	\$75 K
I	\$125 K
J	\$200 K

Year: Oct 03 – Sep 04

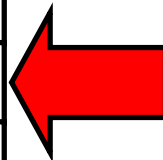
Annual Allowance:  
\$1.2 M

# Annual MRR Allowance (cont.)

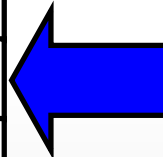
## EXAMPLE

Activity	Cost (w/ order)
A	\$750 K (9)
B	\$50 K (1)
C	\$100 K (3)
D	\$320 K (8)
E	\$1 M (10)
F	\$300 K (7)
G	\$200 K (5)
H	\$75 K (2)
I	\$125 K (4)
J	\$200 K (5)

**ORDER EACH ACTIVITY FROM LEAST TO  
HIGHEST COST!!**



Least Cost



Highest Cost

# Annual MRR Allowance (cont.)

## EXAMPLE

Activity	Cost (ordered)
B	\$50 K
H	\$75 K
C	\$100 K
I	\$125 K
G	\$200 K
J	\$200 K
F	\$300 K
D	\$320 K
A	\$750 K
E	\$1 M

Add Costs from lowest to highest until you reach the \$1.2M Annual MRR Allowance. Activities not fitting under the Allowance threshold are deemed “non-routine” by this approach.

**Annual Allowance: \$1.2 M**

**Cumulative Cost: \$1.05 M**

Activities D, A, and E are not accommodated under the MRR Allowance and are Non-routine by this approach.

# Allowance for Equipment Replacement

- Excludes as RMRR any replacement of process components with identical or “functionally equivalent” components.
    - A “functionally equivalent” component is any component that serves the same purpose as the replaced component
  - Fixed Capital Cost of the activity cannot exceed some (currently undefined) % of the cost to reconstruct a new process unit.
-

# Allowance for Equipment Replacement (cont.)

- The activity is not routine if it changes the “basic design parameters” of the process unit
    - For utilities, BDP are: maximum heat input and fuel consumption specifications
    - For non-utilities, BDP are: maximum achievable hourly input of fuels or materials
  - Proposed rule defines “process unit” and gives definitions for 5 common process units
-

# Other RMRR Approaches offered in the Proposed Preamble

- Capacity-based
- Age-based

# Contacts for RMRR Rules

- General questions  
Dave Svendsgaard  
919-541-2380  
svendsgaard.dave@epa.gov
- Public Hearings, docket  
Pam Smith  
919-541-0641  
smith.pam@epa.gov